

## Hipparcos og Gaia

To foredrag om satellitter med dansk og svensk indsats gennem 85 år

Torsdag den 6. maj 2010  
på Kroppedal Museum

### Erik Høg

Dr. scient, professor v. Niels Bohr Institutet

**From an Experiment in 1925 to the Hipparcos and Gaia Space Missions**



A teenager, Bengt Strömgren, made an astrometric experiment in 1925 which had wide-reaching consequences. The direct connection from Strömgren's photoelectric recording of stellar transits on the old meridian circle in Copenhagen to the Hipparcos and Gaia space missions is presented in the lecture. Peter Naur was astronomer and Høg was his student and collaborator 1953-58 and very interested in techniques. Working in the Hamburg Observatory from 1958-73 Høg invented and developed a semi-automatic meridian circle for an expedition to Perth in Western Australia and a GIER computer went with it. With this experience he could make a new design of an astrometric space mission in 1975 which developed into the Hipparcos mission.

[Afholdes på dansk]



### Lennart Lindegren

Professor, Space astrometry group, Lund Univ.

**Gaia - solving non-linear equations with a billion unknowns**

The satellite Gaia is to be launched in September 2012, and will after a few months take up its observing position at the Lagrange point L2, 1.5 million km away from the Earth. During five or six years it will continuously scan the whole sky, registering the exact positions and motions of a

billion stars, and dispatch an enormous quantity of data back to the Earth. The processing of this data, converting it to a star catalogue eagerly awaited by astronomers around the world, is by itself a great challenge, perhaps as large and difficult as the making of the satellite. It is estimated that the data analysis effort to produce the Gaia catalogue is about one sextillion ( $10^{21}$ ) floating point operations.

[Presented in English]

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**JEH Media 2010**

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DDHF 2010



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DANSK DATAHISTORISK FORENING